



**Supplementary Figure S4.** Free-flight EMG measurement of the hawkmoth (*Agrius convolvuli*) with a wireless telemeter. **(A)** A telemeter (3 channels, 360 mg) and a moth with the telemeter. **(B)** Representative muscle activities (spikes are indicated by arrowheads) during free-flight. EMGs of the DLM and DVM were measured with a single monopolar electrode and were separated after the experiment. Three individual reference electrodes by channels were inserted into the abdomen. The 3AXM activated with the same phase as the DVM whereas the SAM activated with the DLM. **(C)** The timings of muscle activities during wing flapping. The timings of the first EMG spikes are indicated by circles. The DLM and SAM started firing at the end of the upstroke whereas the DVM and 3AXM started firing at the end of the downstroke. The data presented here has been published previously in abstract form (Noriyasu Ando, Ryohei Kanzaki (2004) Multi-channel telemetry revealed dynamic change of flight motor patterns during free-flight maneuvers of hawkmoths. In Proceedings of the 7th International Congress of Neuroethology, Nyborg, Denmark, August 9–13, 2004).